

CONTROLLER FOR GAS CONCENTRATION SENSOR

ABSTRACT OF THE DISCLOSURE

5 An oxygen sensor is employed for determining whether the exhaust
air-fuel ratio is rich or lean. A voltage is applied to the oxygen sensor at device
impedance calculation intervals to calculate device impedance. After device
impedance calculation, a reverse voltage is applied to the oxygen sensor with a
view toward promptly negating the influence of voltage application on the sensor
output. Subsequently, the sensor output of the oxygen sensor is sampled at
10 sampling time intervals until it is concluded that the device impedance calculation
period is over.